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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/029,006 | 12/28/2001 | Hitoshi Shindo | 461-43 | 3756 |

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NIXON & VANDERHYE, PC
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| EXAMINER |
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VIJAYAKUMAR, KALLAMBELLA M

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| ART UNIT | PAPER NUMBER |
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1751

DATE MAILED: 07/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,006

Applicant(s)

SHINDO ET AL.

Examiner

Kallambella Vijayakumar

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 5, 14, 15, 18, 27, 29, 30 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 14, 15, 18, 27 and 30 is/are rejected.
- 7) ☒ Claim(s) 5, 29 and 32 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

- Claims 1, 5, 14-15, 18, 27, 29-30 and 32 are currently pending with the application.
- Rejection of Claims 1, 5, 27 and 29 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 16-17 and 21-24 of U.S. Patent No. 6,690,571 is withdrawn over the amendments to the claims.
- A telephone call to Mr. Arthur Crawford to condition the application for allowance did not materialize in its allowance.
- The indicated allowability of claims 14 and 18 is withdrawn in view of the newly discovered reference(s): Uchiyama et al (JP 11-066,952). Rejections based on the newly cited reference(s) follows.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 14, 15, 27 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "mainly" in claim 1, 14, 15, 27 and 30 is a relative term, which renders the claim indefinite. The term "mainly" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would

not be reasonably apprised of the scope of the invention. It is not clear what percentages of the cooperative material with $\text{Pb}(\text{Zr,Ti})\text{O}_3$ structure are encompassed by this limitation. The examiner construes this to be more than 50% by weight of the cooperative material for the purposes of the examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 14 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchiyama et al (JP 11-066,952).

The use of phrase “for constituting electrode layers.....and baking the laminate” in the claim 14 has not been treated with patentability. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

The examiner construes this language as "Intended Use" and not treated with merits for patentability.

The prior art teaches a composition of the conductive paste comprising (A). 70 wt% of a conductive powder containing (i). 100 pts wt (pbw) **CuO** as principal component containing less than 10 wt% **Cu** powder and (ii). 0.5-7 pbw **zirconium oxide** <cooperative material>, and (B). 30 wt% organic vehicle comprising ethyl cellulose in terpeniol (Abstract, Para 0024, 0028, 0044, 0048, Table-1, Sample-11). This translates to 65.4-69.7wt% (CuO+Cu) and 0.4-4.9 wt% ZrO₂ in the paste composition that meets the component ratios in the claims. All the limitations of the instant claims are met.

The reference is anticipatory.

Allowable Subject Matter

Claims 1, 27 and 30 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 5, 29, and 32 are objected to as being dependent upon a rejected base claim/s.

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and upon overcoming rejections under 35 USC 112, 2nd paragraph as set forth in this office action.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither teaches nor fairly suggestive of an electrode paste comprising

CuO and Pb(ZrTi)O₃ or CuO+Cu and Pb(ZrTi)O₃ with the specific ratios of the components in the composition per the applicants. The closest prior art of record by Sunhara et al (US 4,985,376) teaches a Au-electrode paste containing Pb-perovskite adhesion promoters, but it does not teach or suggestive of a CuO electrode paste of the applicants.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kallambella Vijayakumar whose telephone number is 571-272-1324. The examiner can normally be reached on M-Th, 07.00 - 16.30 hrs, Alt. Fri: 07.00-15.30 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Yogendra Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KMV
June 15, 2005


Mark Kopec
Primary Examiner